

### Remarks

Claims 1-29 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The non-final Office Action dated March 3, 2006 indicated the following rejections: that claims 1, 2, 4, 8, 14-17, 23, 26-27 and 29 stand provisionally rejected on the ground of obviousness-type double patenting over Avery (U.S. Application No. 10/796,480); that claims 1-29 stand rejected under 35 U.S.C. § 112(2); and that claims 1-10, 13-14, 16-18, 22-26 and 29 stand rejected under 35 U.S.C. § 103(a) over Garreau (U.S. Patent No. 6,425,101).

Applicant respectfully traverses the provisional obvious-type double patenting rejections of claims 1, 2, 4, 8, 14-17, 23, 26-27 and 29. To maintain an obviousness-type double patenting rejection, the Office Action must largely comply with the same standards as those applicable to a Section 103 rejection. In this instance, the double-patenting rejections are improper because the claims of co-pending Application No. 10/796,484 do not contain a test-signal sense circuit or a test-signal sense means. Moreover, pursuant to M.P.E.P. § 804, with the remaining rejections having been addressed and overcome, these provisional rejections should be withdrawn. Notwithstanding the above, consistent with the Office Action's indication that a timely-filed Terminal Disclaimer may overcome each of the provisional, obvious-type double-patenting rejections, with a proper showing, Applicant would be willing to reconsider this traversal.

Applicant traverses the Section 112(2) rejections of claims 1-29 because the claimed limitations are readily discernable in a manner consistent with the requirements of Section 112(2), and are further supported in the specification. Specifically, as consistent with M.P.E.P. § 2173.02, "[t]he requirement to 'distinctly' claim means that the claim must have a meaning discernible to one of ordinary skill in the art when construed according to correct principles." Further, a claim is indefinite "[o]nly when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction." Here, the Office Action fails to show or allege such ambiguity as applicable to any of the claimed limitations. The following discussion more particularly addresses the impropriety of the rejections of various claim limitations under Section 112(2).

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Regarding the Section 112(2) rejections of claims 1-7, 9, 11-14, 17-18, 21-23, 26 and 29, the terms "adapted to," "adaptively" and "adapted for" are clear and have come to be commonly used terms in claiming an invention. A brief review of the U.S. Patent Office's own database indicates that the term "adapted" has been used in the claims of over 100,000 issued patents in recent years. Moreover, the specification describes various examples that may be applicable to such limitations. For instance, the discussion in the specification in connection with FIG. 1 describes example embodiments directed to a communications link that is coupled (*e.g.*, adapted to communicatively couple) to a user interface by way of a communications port. In view of the foregoing, Applicant contends that the scope of the claims is ascertainable and therefore the Section 112(2) rejections should be withdrawn. Notwithstanding, to facilitate prosecution, Application has removed the words "adapted" from each of the independent claims without limiting the claim scope or acquiescing to the rejection.

Applicant understands that the Section 112(2) rejection applies to claim 9 because the indicated claim phrase "a plurality of JTAG signal path switches adapted to route JTAG signals on the routing circuitry and between the routing circuitry and an external circuit." Applicant traverses as above since the claim would be understood by one of ordinary skill in the art (*e.g.*, that the JTAG signals are routed "on the routing circuitry and between the routing circuitry and an external circuit") and as supported by examples in the specification. As for the Examiner's question at page 6 (para. 3) of the Office Action, Applicant notes that claim 9 is fully supported by the specification. See, for instance, example embodiments at page 16, line 20, to page 17, line 2. Accordingly, the Section 112(2) rejection of claim 9 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses each of the Section 103(a) rejections over the Garreau reference because the Office Action has failed to state the rejection in a manner consistent with 35 U.S.C. § 132, in that the Office Action fails to provide any specific correlation between the Garreau reference and the different limitations of the claimed invention. Applicant submits that the Garreau reference appears to be entirely unrelated to the invention "as a whole" (35 U.S.C. § 103) which invention is largely concerning the claimed controllable switches. Notwithstanding, Applicant is unable to understand the rejections and/or to adequately evaluate the rejections and respond thereto because of the

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inadequate correlation provide to the Garreau reference. In this light, Applicant attempts to address the rejections below.

More specifically, the Section 103(a) rejections fail to explain how the references cited by the Office Action teach all of the limitations found in the claimed invention. After the Office Action acknowledges that a main aspect of the claimed invention is not present in the Garreau reference (controllable switches), the Office Action fails to mention other closely related claimed aspects. For example, the cited portion of the Garreau reference does not teach or suggest the limitations of independent claims 1, 14 and 29 directed to a test-signal sense circuit or test-signal sense means for detecting test signals carried by at least one of the test signal routing paths. In claim 23, analogous deficiencies are apparent with respect to the last three paragraphs concerning the routing switches. In light of this lack of correspondence, the alleged prior-art teaching of the "control logic circuit" would in no way be responsive to the signals detected by the test-signal sense circuit as claimed. The Office Action fails to cite any reference that teaches a test-signal sense circuit or means. Accordingly, the Section 103(a) rejections of each if the independent claims are improper and Applicant requests that they be withdrawn.

More specifically, regarding independent claim 23, the Garreau reference also does not teach or suggest limitations directed to routing JTAG test signals along a JTAG circuit path on at least the first one of the inter-connectable circuit boards. The Garreau reference appears limited in application to the routing of test signals between an off-chip JTAG controller (210) and an integrated circuit (IC1-IC4) through the use of a programmable switch (400), and fails to teach or suggest the routing of JTAG test signals on an inter-connectable circuit board as in claim 23 (*e.g.*, via a microcontroller). *See, e.g.*, Fig. 4 of the Garreau reference. Moreover, the Garreau reference does not teach or suggest limitations directed to passing JTAG signals to and from an inter-connectable circuit board to other inter-connectable circuit board as claimed. The cited portion of the Garreau reference teaches routing test signals between a JTAG controller (210) and an integrated circuit (IC1-IC4) through the use of a programmable switch (400) (*see, e.g.*, FIG. 4 of the Garreau reference). It appears that Garreau's programmable switch (400) selectively (independently) connects the JTAG controller (210) to the integrated circuits (IC1-IC4). (*See, e.g.*, Fig. 4, col. 7, lines 29-58). As such, the integrated circuits in the

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Garreau reference are not coupled to each other and test signals are not passes between the integrated circuits, or between inter-connectable circuit boards. Therefore, the cited portions of the Garreau reference do not teach or suggest the limitations of claims 23. Accordingly, the Section 103(a) rejection of independent claim 23 is improper and Applicant requests that it be withdrawn.

The Section 103(a) rejections of dependent claims 2-13 (which depend from claim 1), 15-22 (which depend from claim 14), and 24-28 (which depend for claim 23), are also improper for the reasons discussed above. However, the impropriety of the rejections regarding certain other limitations in the dependent claims are addressed in greater detail as follows.

Regarding claim 6, the cited portion of the Garreau reference does not teach or suggest the limitations directed to a test-signal sense circuit adapted to detect test signals passing between the configurable test signal routing paths and an external circuit. The Garreau reference fails to teach these limitations for the same reason discussed above relating to the Section 103(a) rejection of claim 1, in that the cited portion of the Garreau reference makes no mention of a test-signal sense circuit. Moreover, the Garreau reference does not teach or suggest that a control logic circuit controls the routing of test signals in response to the test signals detected by the test-signal sense circuit as in the claimed invention. Applicant requests that the Section 103(a) rejection of claim 6 be withdrawn.

Regarding claim 16, the cited portion of the Garreau reference does not teach or suggest the limitations directed to routing JTAG test data between the configured circuit and an external configured circuit. The Garreau reference fails to teach these limitations for the same reason discussed above relating to the Section 103(a) rejection of claim 23, in that the cited portion of the Garreau does not teach or suggest routing JTAG test data between configured circuits. Applicant requests that the Section 103(a) rejection of claim 16 be withdrawn.

Regarding claim 18, the cited portion of the Garreau reference does not teach or suggest the limitations directed to computer-executable code being received from the user interface via the communications port and then stored in memory. The Office Action acknowledges that the Garreau reference does not explicitly teach a memory for storing

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the computer-executable code, but instead asserts that it would be obvious that Garreau's host computer (702) has memory (*see, e.g.*, FIG. 7). Following this acknowledgement; the memory in the Garreau reference is part of the user-interface. Therefore, the Garreau reference does not teach or suggest that computer-executable code can be sent from the user-interface (702) via a communications port to the master controller (704) and then stored in memory (*see, e.g.*, FIG. 7). Accordingly, the Section 103(a) rejection of claim 18 is improper and Applicant requests that it be withdrawn.

Regarding claim 22, the cited portion of the Garreau reference does not teach or suggest the limitations directed to an analog-to-digital converter (ADC) coupled to the configured circuit. This is consistent with the discussion in the Office Action, which acknowledges that the Garreau reference does not explicitly teach an ADC. However, instead of citing a reference that shows claimed limitations including the ADC, the Office Action asserts that it would have been obvious to one skilled in the art that Garreau's test network (200) would have an ADC. This assertion is unsupported in the Garreau reference and contrary to the requirements of Section 103. Specifically, a *prima facie* case of obviousness under Section 103 requires that the cited references show all of the claimed limitations. Here, the Office Action fails to meet these requirements. Moreover, the Office Action has provided no motivation of why one skilled in the art would combine an ADC with the Garreau reference. The mere fact that an ADC is well-known in the art and/or that an ADC can be combined with a particular circuit does not by itself provide motivation for combining an ADC with Garreau reference. Applicant requests that the Section 103(a) rejection of claim 22 be withdrawn.

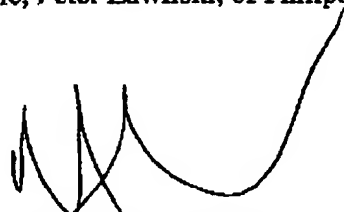
Regarding claim 24, the cited portion of the Garreau reference does not teach or suggest the limitations directed to routing JTAG test signals between the inter-connectable circuits. The Garreau reference fails to teach these limitations for the same reason discussed above relating to the Section 103(a) rejection of claim 23, in that the cited portion of the Garreau does not teach or suggest routing JTAG test signals between inter-connectable circuits. Accordingly, the Section 103(a) rejection of claim 24 is improper and Applicant requests that it be withdrawn.

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In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of Philips Corporation at (408) 474-9063.

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